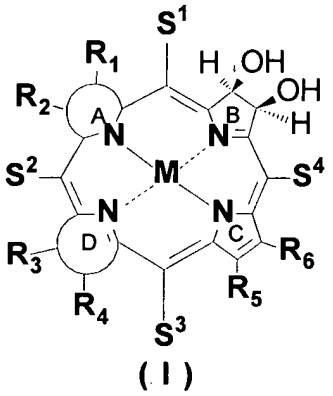
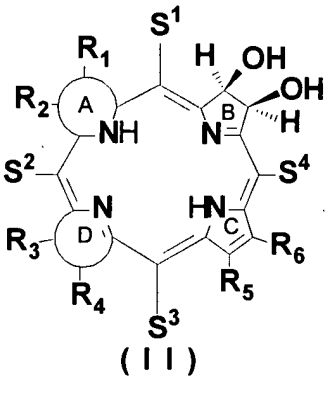
We claim:

1. A pharmaceutical composition comprising an improved β,β-dihydroxy meso-substituted chlorin, bacteriochlorin or isobacteriochlorin compound having the formula (I) or (II):



(I)

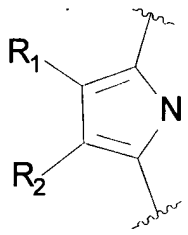
or



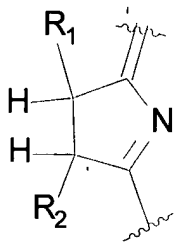
(II)

wherein M is a metal selected from the group consisting of Ni(II), Cu(II), Zn, Sn, Ge, Si, Ga, Al, Mn(III), Gd(III), In and Tc;

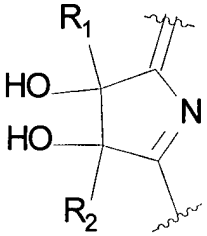
A is a ring having the structure:



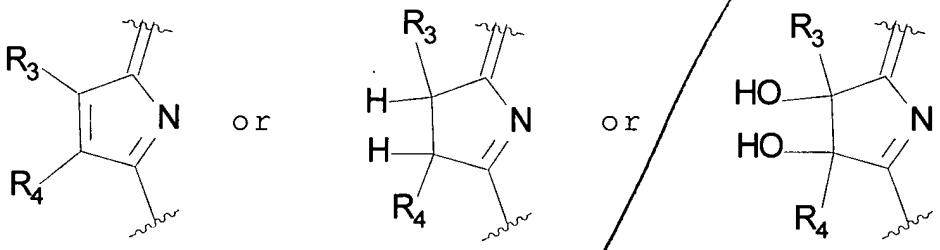
or



or



D is a ring having the structure:



R_1 through R_6 are independently a hydrogen atom, a lower alkyl group, a lower alkyl carboxylic acid or acid ester group, keto, hydroxy, nitro, amino, or a group that, taken together with another ring, ring substituent or meso-substituent, forms a fused 5- or 6-membered ring; and

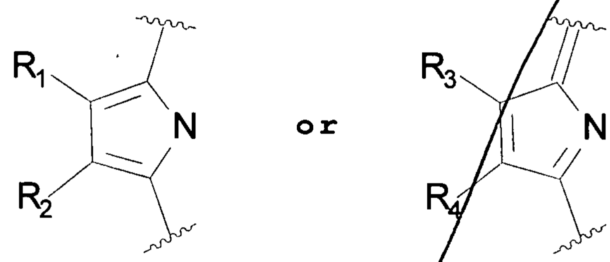
at least one of S^1 to S^4 is a phenyl group and the other S positions are independently selected from H, substituted or unsubstituted alkyl groups, or substituted or unsubstituted aromatic rings, which may be the same or different; and

a pharmaceutically acceptable excipient.

2. The composition of claim 1 having the formula (I) wherein M is Zn.

3. The composition of claim 1 having the formula (II).

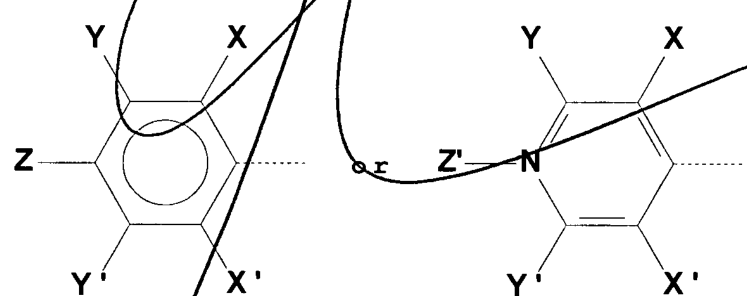
4. The composition of claim 1 wherein at least one of A and D is a ring having the structure:



5. The composition of claim 1 wherein R_1 through R_6 are independently hydrogen, methyl, ethyl, or lower alkyl esters.

6. The composition of claim 1 wherein S^2 and S^4 are phenyl groups.

7. The composition of claim 1 wherein at least one of S^1 through S^4 has the structure:



wherein X, X', Y, Y' and Z are independently hydrogen, halogen, lower alkyl, lower alkoxy, hydroxy, carboxylic acid or acid salt, carboxylic acid ester, sulfonic acid or acid salt, sulfonic acid ester, substituted or unsubstituted amino, cyano, nitro, or a biologically active group, and Z' is hydrogen or lower alkyl.

8. The composition of claim 7 wherein X, X', Y, Y' and Z are selected from the group consisting of hydrogen, methyl, ethyl, t-butyl, methoxy, hydroxy, OR

where R is an alkyl group or a fatty acid group having from 6 to 18 carbon atoms, fluoro, chloro, iodo, bromo, -C(O)-OCH_3, cyano, nitro, or a ligand specific for a biological receptor.

9. The composition of claim 7 wherein X, X', Y and Y' are each hydrogen, and Z is selected from the group consisting of hydrogen, halogen, lower alkyl, lower alkoxy, hydroxy, carboxylic acid or acid salt, carboxylic acid ester, sulfonic acid ester, sulfonic acid or acid salt, nitro, amino, cyano, and a biologically active group.

10. The composition of claim 7 wherein at least one of X, X', Y, Y' and Z is a biologically active group or a substituent that increases the amphiphilic nature of the molecule.

11. The composition of claim 1 wherein said improved compound is selected from the group consisting of compounds 3 to 30.

12. The composition of claim 11 wherein said improved compound is compound 25.

13. An improved β,β-dihydroxy meso-substituted chlorin, bacteriochlorin or isobacteriochlorin compound selected from the group consisting of compounds 3 to 24 and 26-30

14. A method of photodynamic therapy comprising irradiation of a cell, tissue, organ, or subject to which a compound of claim 1 has been administered.

15. The method of claim 14 wherein said compound is compound 25.